SYSTEM AND METHOD FOR PROVIDING A WIDE ASPECT RATIO FLAT PANEL DISPLAY MONITOR INDEPENDENT WHITE-BALANCE ADJUSTMENT AND GAMMA CORRECTION CAPABILITIES

ABSTRACT OF THE DISCLOSURE

A system and method are described herein for controlling the white balance and providing gamma correction without compromising gray-scale dynamic range in a flat panel liquid crystal display (LCD). According to one embodiment of the present invention, the flat panel LCD includes electronic circuitry for coupling to a host computer to receive a white-balance adjustment control signal, and electronic circuitry for receiving image data to be rendered on the flat panel LCD. Further, the flat panel LCD of one embodiment is configured for coupling to a color-sensing device to receive optical characteristics data of the flat panel LCD detected by the color-sensing device. The white balance adjustment mechanisms include the provision of two or more light sources of differing color temperature, whose brightness can be independently varied (and distributed through a light distribution mechanism) to adjust color temperature without altering the grayscale resolution of the RGB colors. The present invention further includes white balance adjustment software and gamma correction software for generating white-balance adjustment control signals and appropriate gamma correction curves.